

**Notice of Allowability**

Application No.

10/065,580

Examiner

Rob Wu

Applicant(s)

BAUER ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on February 16, 2007.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Penny A. Clarke on April 26, 2007.

The application has been amended as follows:

Claim 1:

An inspection method comprising:

Determining a plurality of measurement variations and product characteristic variations to define an inspection plane;

Dividing the inspection plane into a plurality of regions corresponding to respective different outcomes resulting from an inspection process;

Determining the probability of each outcome based on a probability mass in each region of the inspection plane, wherein the probability mass is based on a joint probability density of the measurement and product characteristic variations;

Associating costs to various outcomes based on the inspection process;

Computing overall costs of the inspection process by using the associated costs and the determined probability of each outcome based on the regions of the inspection plane;

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Performing a first inspection on a product to obtain an inspection outcome; and  
accepting or rejecting the product [based on the inspection outcome] using the  
determined inspection plane.

### Reasons for Allowance

2. Claims 1-17 are allowed over prior art of record.
3. The following is an examiner's statement of reasons for allowance:

The closest prior art of record is U.S. Pat No. 5,608,658 to Yao et al and U.S. Pat No. 4,677,993 to Kato et al.

Yao et al disclose a method of inspecting products wherein a defect index that is a random variable characterized by a statistical distribution is realized, a lower and upper bounds for number of inspected units in a batch are defined and a plurality of benchmark values are defined wherein each benchmark value is associated with a different number of testes units. The purpose of Yao et al's invention is to develop a dynamic inspection technique that can be used to identify different thresholds for which number of units within a batch need to be inspected such that costs due to the inspection, repair and warranty are minimized.

Kato et al disclose a method of inspecting cigarette paper wherein the mean, variance and standard deviation are obtained, then transformation of their normal distribution into a standard normal distribution of  $N(0,1)$  where the mean with respect to the probability density function  $\Phi(t)$  is 0 and variance with respect to thereto is 1, is obtained. And the estimation of population standard deviation with setting of a significance level is done with the value of  $t$  with respect to the probability determined solely by determining the probability in the normal distribution, thereby effecting a decision as to whether the inspected product is non-defective or defective.

As per claims 1, 16 and 17, the closest prior art of record taken either individually or in combination with other prior art of record fails to teach or suggest determining a plurality of measurement variations and product characteristic variations to define an inspection plane, dividing the inspection plane into a plurality of regions corresponding to respective different outcomes resulting from an inspection process, determining the probability of each outcome based on a probability mass in each region of the inspection plane, wherein the probability mass is based on a joint probability density of the measurement and product characteristic variations and determining the acceptance and rejection of a product after a first inspection using the determined inspection plane. Claims 2-15 depend upon claim 1 and have all the limitations of claim 1 and are allowable for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

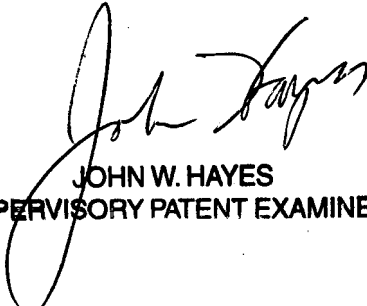
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rob Wu whose telephone number is (571)272-3136. The examiner can normally be reached on Mon-Fri 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571)272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rw



JOHN W. HAYES  
SUPERVISORY PATENT EXAMINER